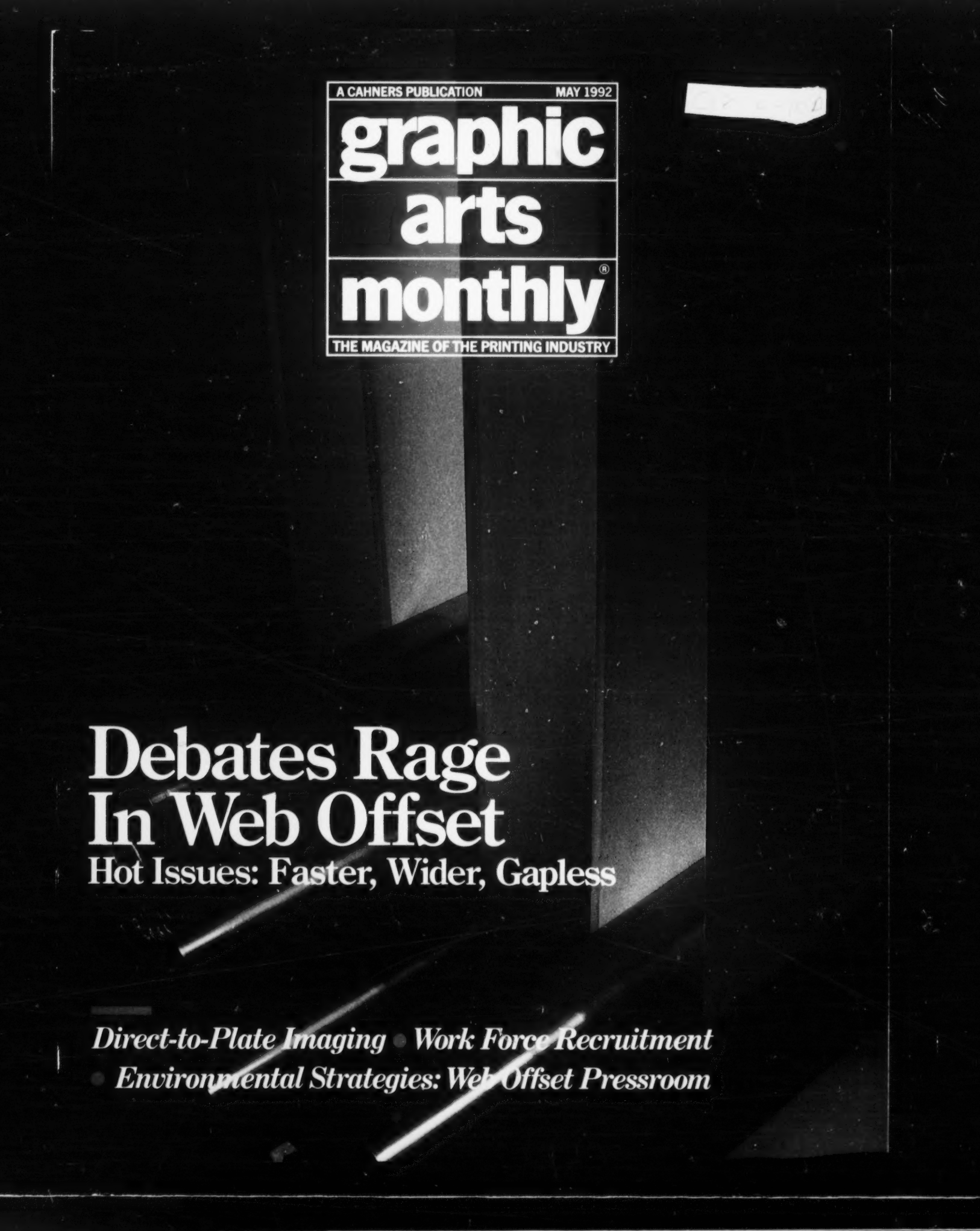
A CAHNERS PUBLICATION MAY 1992

graphic arts monthly®

THE MAGAZINE OF THE PRINTING INDUSTRY



Debates Rage In Web Offset

Hot Issues: Faster, Wider, Gapless

Direct-to-Plate Imaging • Work Force Recruitment • Environmental Strategies: Web Offset Pressroom

VOLUME 64, NUMBER 5

A CAHNERS PUBLICATION MAY 1992

graphic arts monthly

THE MAGAZINE OF THE PRINTING INDUSTRY

TOTAL CIRCULATION: 99,585

FEATURES

page 52

Debates Rage in Web Offset
By Debbi Toth
A lively, extensive discussion centers on features, technology, speed, and page formatting.
34

Webs Face the Eco-Challenge
By Lisa Cross
Web printers confront stricter air pollution and waste disposal laws.
44

Recruting is Redefined
By Bridget Kinsella Arajs
Finding talented and qualified people to run equipment will always be a concern among printers.
52

Print Target Markets: Politics Sets Education Agenda
Educational institutions buy a lot of printing.
59

Direct-To-Plate Eyes Acceptance
User benefits range from faster turnaround to the elimination of certain prepress steps.
67

Profiting in the Mid-Range
This sheetfed house is winning with a strategy based on UV printing.
72

On The Cover: Photographed by Gary Sigman/Black Star at Kukla Press, Inc., Elk Grove Village, Ill.

Teamwork Key To SPC Success
By Bill Esler
This printer uses management principles that brought success to Japan.
78

The Answer was In the Water
By Noel Jeffrey
Getting rid of alcohol in the system was easy once the water was cleaned up.
84

A Primer For The Future
By Michael Karol
A thorough company evaluation will set the printer on a positive course toward 2001.
88

IMAGING CENTER

New Screening Technology
101

Last Chance for Printers
By Earl Wilken
104

Partnering and Production
108

Contents continues on page 5

graphic arts monthly

Vice-President and Publisher
Ronald C. Andriani

Editor Roger Ynostroza

Managing Editor Michael Karol

Associate Editors Earl Wilken, Lisa Cross

Assistant Editor Bridget Kinsella Arajs

Art Director Karen Lehrer

Production Editor Mick Andreano

Special Projects Manager
Peter Johnston (212) 932-3368

Project Editor Debora Clesh Toth

Midwest Editor
Bill Esler (312) 226-4641

Contributing Editors
Dick Gorelick, George Griffin, Gerald Silver, Nancy Plowman, Theodore Lustig, Michael J. Ducey

Classified Advertising Manager
Kevin D. Thomas (212) 463-6843
Maureen Lewis, Assistant

Direct Marketing Manager
Richard Negri (212) 463-6827

Business Manager Jerry Arotsky

Contracts Jeffrey Rothstein

Production Manager
Daniel Coakley (212) 463-6545

Promotion Manager
Dorian Torregrossa

Research Manager
Angela Venturino Darchi

Publisher's Assistant Holly Hoffman

Sales Administrator Elisa Balsamo

Bulk Reprints Carol Bien
1-800-323-4958

Supplement Reprints Cathy Dionne
1-800-523-9654

Circulation Director
Ed Christ (303) 398-7609

Subscriptions/Back Issues
1-800-637-6089

249 W. 17th St., New York, NY 10011
Sales offices: (212) 463-6828
Editorial offices: (212) 463-6834
Facsimile: (212) 463-6733

PREPRESS IMAGING

Users Engage Vendors at Forum 102
By Earl Wilken

The Role of the RIP Hard Disk 106
By Diane Anderson

The Transition to the Desktop 112
By Arlene E. Karsh

UPFRONT

Mailbox 8

Editorial 10

Business Outlook 13

Market Watch 14

Graphic Arts Index 14

Press Clips 16

Washington Briefs 18

Mergers & Acquisitions 20

News 22

Calendar 25

People 29

Companies 31

COLUMNISTS

Selling Yourself 116
George Griffin

Marketing 120
Dick Gorelick

Estimating 122
Gerald A. Silver

Print Clinic 124
Nancy Plowman

Paper 128
Michael J. Ducey

Ink 134
Theodore Lustig

DEPARTMENTS

Reader's Choice 115

New Products 138

Literature 163

How'd They Print That? 170

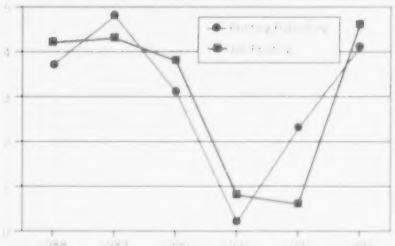
Classified 172

Advertisers Index 198

Graphic Arts Monthly (ISSN 1047-9325) (GST 123397457), including The Printing Industry and Business Graphics®, is published monthly by The Cahners Publishing Company (Subscription includes all issues). Cahners Publishing Company is a Division of Reed Publishing USA, 275 Washington St., Newton, MA 02158-1630. Terrence M. McDermott, President/Chief Operating Officer; Frank J. Sibley, Executive Vice President; Robert T. Brawn, Senior Vice President/General Manager; Jerry D. Neth, Senior Vice President/Publishing Operations; J.J. Walsh, Senior Vice President/Finance; Thomas J. Dellamaria, Senior Vice President/Production and Manufacturing; Ralph Knupp, Vice President/Human Resources; Barrie Stern, Director of Art Department. Circulation records are maintained at Cahners Publishing Company, 44 Cook St., Denver, CO 80206-5800. Phone 303-388-4511. Second-class postage paid at Denver, CO 80206-5800 and additional mailing offices. **Postmaster: send address changes to Graphic Arts Monthly, P.O. Box 173377, Denver, CO 80217-3377.** Graphic Arts Monthly © Copyright 1992 by Reed Publishing USA; Robert L. Krakoff, Chairman and Chief Executive Officer. Annual subscription rates for non-qualified people: USA, $84.95 ($143.95 for two years). Mexico: $153.95 ($261.95 for two years). Canada: $164.95 ($279.95 for two years). Other nations: $169.95 ($288.95 for two years) surface mail; $275.95 ($468.95 for two years) via airmail. Single copies are available for $20.00 (USA) and $25.00 (all others). February issue is available for $50.00 (USA and all others). Print Market Outlook, monthly management newsletter, available for $129.00. Please address all subscription mail to Graphic Arts Monthly, 44 Cook St., Denver, CO 80206-5800. **Graphic Arts Monthly® is a registered trademark of Reed Properties, Inc., used under license.** All Rights Reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage retrieval system, without permission of the copyright owner. Copies of back issues are available on microfilm from University Microfilm, 300 N. Zeeb Rd., Ann Arbor, MI 48106. (ISSN 1047-9325)

Cahners Publishing Company, A Division of Reed Publishing USA ☐ Specialized Business Magazines for Building & Construction ☐ Research ☐ Technology ☐ Electronics ☐ Computing ☐ Printing ☐ Publishing ☐ Health Care ☐ Foodservice ☐ Packaging ☐ Environmental Engineering ☐ Manufacturing ☐ Entertainment ☐ Media ☐ Home Furnishings ☐ Interior Design ☐ Lodging. Specialized Consumer Magazines for Child Care ☐ Boating ☐ Wedding Planning.

Production Index Shows Slight Improvements

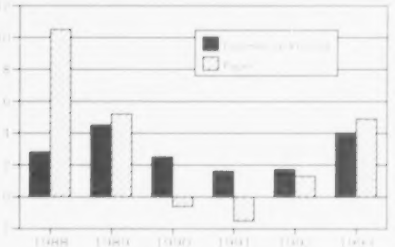


Industrial Production
annual % change

Source: Federal Reserve Board Forecast: Cahners Economics

The industrial production index for printing and publishing has shown steady growth for the last six months, following a real slowdown in mid-1991. Currently 1.6% above the year-ago level, the upward movements in the index indicate that industry activity is improving. Production growth is projected at 2.2% for 1992 and 4.1% for 1993. The index is a weighted composite of the three sectors of the industry. Newspapers represent one quarter of the industry's output and this sector remains the sore spot, as production levels are well below a year ago. In fact, 1991 was the third year in a row of declining activity. The periodical and book sector represents 30% of the industry; production has continued at a strong pace, despite a slowdown in sales growth of these products. The final and largest sector of the industry, job printing, is currently experiencing its slowest period since 1980. After a flat year in 1991, job printing production is expected to post only minimal growth in 1992. A strong rebound in printing activity is not anticipated until 1993.

Price Increases Remain Small



Producer Prices
annual % change

Source: Bureau of Labor Statistics Forecast: Cahners Economics

One of the positive results of an economic recession is the effect on price inflation. While a robust economy puts upward pressure on prices, a recession removes that pressure. The commercial printing sector is currently seeing a tremendous slowdown in producer price inflation. In 1991, the producer price index (PPI) for commercial printing posted a slim 1.6% rise. In the first few months of 1992, the index has shown little upward movement and currently stands only 1.2% above the same level a year ago. Aside from the effects of the recession, printing prices have stabilized as the costs of inputs have decreased. In particular, the price of paper actually dropped for the second consecutive year in 1991. Paper prices are not expected to swell any time in the near future, given the general overcapacity and slack demand for paper. Paper price gains are expected to be 1.3% in 1992 and 4.9% in 1993. Likewise, prices of other supplies have also slowed. As a result, we predict that printing prices will post gains of 1.7% in 1992 and 4% in 1993.

The printing activity indicators outline a stable industry situation. Given the current economic environment, the industry is not expected to improve substantially. Still, slow growth is better than no growth. As a whole, the economy is projected to pick up in the second half of this year. All the major economic indicators, including business confidence and the Cahners Early Warning Indicator, point toward this impending upturn.

PRINTING ACTIVITY INDICATORS

				Annual % Change			
General Economic	**Q4/90**	**Q3/91**	**Q4/91**	**1990**	**1991**	**1992**	**1993**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Industrial Production (3)	**Jan 91**	**Dec 91**	**Jan 92**	**1990**	**1991**	**1992**	**1993**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Producer Prices (4)							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

graphic arts monthly

Politics Sets Education Agenda

As you are aware, this series focuses on various industries, groups of industries, and services. And, as you are no doubt sick of hearing already, this is an election year. Researching and writing these articles at such a politically busy time has brought home as never before the degree to which politics and the economy are entangled.

This is not exactly news, of course. Every field of economic activity imaginable, including the printing industry, is represented in Washington and in most state capitals by a professional lobbying organization. Those folks are not there because they took their ninth-grade civics classes to heart and never forgot them. Not at all. They are there because a lot of money is at stake.

Take, for example, the subject of this month's installment, education. It is not exactly an industry, but it is a major focus of economic activity. At any given moment, between 50 and 60 million people in this country are formally enrolled in an educational institution of some sort.

There have been some questions raised about how much they are learning, or whether they should be learning something else instead; indeed, the publication of books about what's wrong with education has itself become a thriving subindustry.

> Educational institutions buy a lot of printing.

What is not in question is that all this education, whatever its efficacy, costs a great deal of money. College costs the most, for a lot of reasons, including perhaps the fact that the current ratio of college students to college employees in the U.S. is about 12 to 1; the ratio for elementary and secondary schools is 92 to 1. But even kindergarten can be expensive these days.

The good news is that educational institutions buy a lot of printing. Our own figures show a volume of $362 million, which does not count the vast amount of in-plant printing done in this sector. Whatever its political fortunes, our survey respondents expect it to remain as a stable and often growing print customer.

This article is the fifth in a yearlong series. In addition to the Print Target Market profile, each of these articles contains news on the fortunes of the commercial printing industry in one geographic region. Subject of this month's Regional Update: the Pacific region (California, Oregon, Washington, Alaska, and Hawaii).

Reprints may be ordered from Cathy Dionne, Cahners Publishing, Reprint Department, 1350 E. Touhy Ave., Des Plaines, IL 60018; telephone (800) 523-9654 in the U.S. In Canada, call (708) 390-2777.

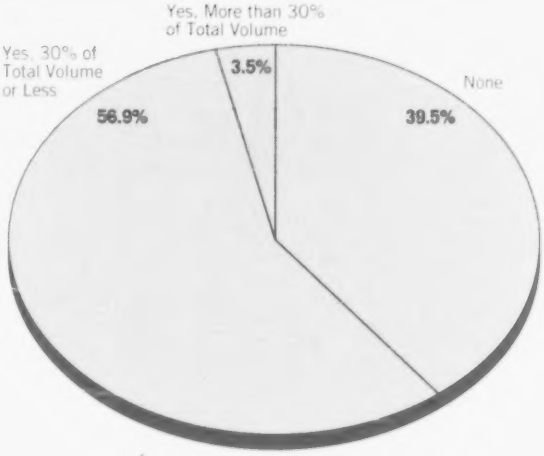
Anne Gusman

By Peter Johnston
Special Projects Manager

Does Your Firm Work for Educational Institutions?

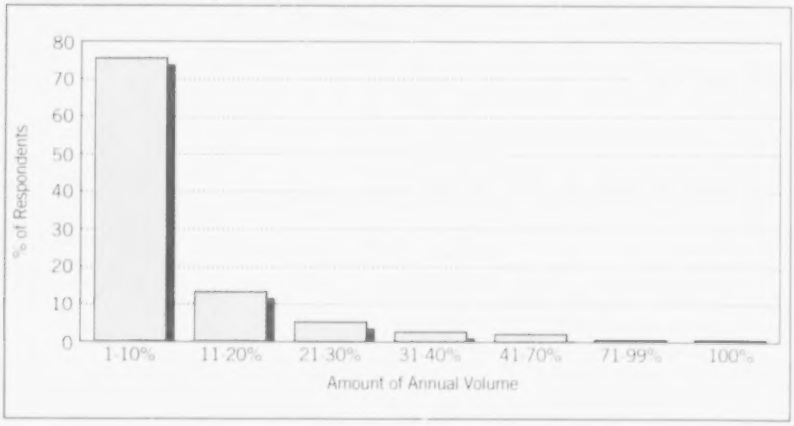
To measure the breadth of education's impact on commercial printing, small- and medium-sized commercial printers across the country were surveyed for this article. Printers to be surveyed were selected on a random (every nth name) basis from the current circulation list of GRAPHIC ARTS MONTHLY. Just over 60% of printers responding to the survey reported doing at least some work for educational establishments.

As noted elsewhere, this representation would be much larger if it were not for the high incidence of in-plant printing plants in larger educational institutions. A recent survey by the In-Plant Printing Management Association shows that about 25% of in-plant printers seem to be in educational institutions, which means that there are about 16,500 educational in-plants. In any case, there are unquestionably an awful lot of them.

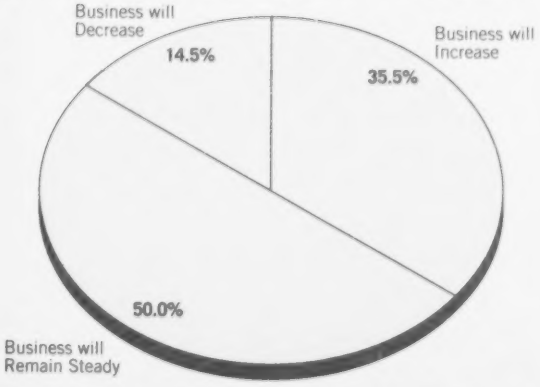


If So, How Much of Your Annual Volume is Printing for Education?

Though a fairly high percentage of printers report doing some work for educational institutions, the amount of work they derive from this market is comparatively low. Education provides 10% or less of total annual volume for 75% of respondents who do some educational printing. On the high end of the scale, we see very few plants heavily dependent on education: just over 3% of respondents derive more than 40% of their revenues from schools.



Over the next 12 months, will your share of business represented by education rise or fall?



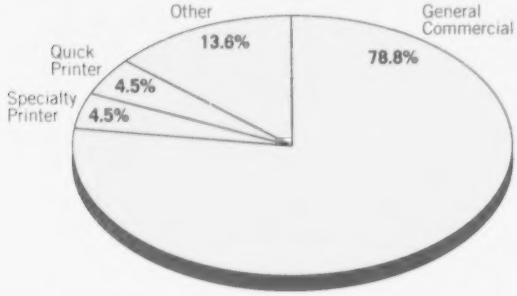
Printer-Supplied Products for Education

As they do to all the other industries studied, commercial printers sell an awful lot of stationery and business forms to educational institutions. An almost identical proportion of them sell advertising printing of some kind to this segment, one indication of how competitive the education "business" has become.

Stationery and Business Cards	60.6%
Business Forms	55.3%
Advertising Sheets, Pamphlets, or Brochures	45.2%
Unbound Non-Advertising Material	33.5%
Miscellaneous Non-Printing Services	32.4%
Bound Publications	26.6%

Regional Update/Pacific

Type of Company

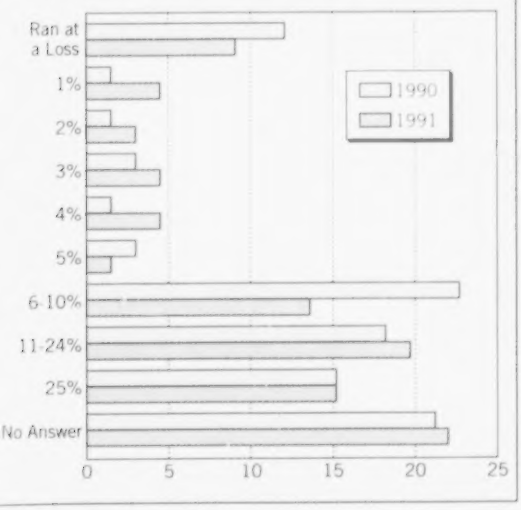


Profile of Respondents

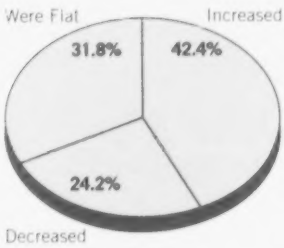
Commercial printers in the far Western states responding to a recent mail survey reported year-over-year changes in their annual sales, profitability, and operating capacity. They also revealed how they perceived the outlook for business in their area.

Gross Sales in 1991		# of Employees	
Less than $500,000	66.7%	1-4	50.0%
$500,000-749,999	15.2%	5-9	25.8%
$750,000-999,999	6.1%	10-19	16.7%
$1 million-2,499,999	7.6%	20 or more	4.5%
$2,500,000-4,999,999	3.0%		
$5 million-9,999,999	1.5%		

Profit as a Percent of Gross Sales, 1990



How Sales Changed, 1990 to 1991

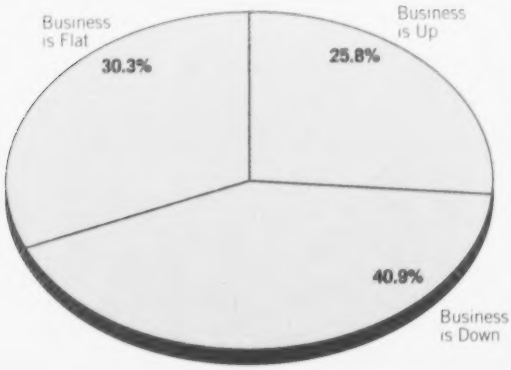


1990 to 1991	
Sales Increased	42.4%
Sales Decreased	24.2%
Sales Were Flat	31.8%

If Sales Increased 1990-1991, How Large Was Increase?	
Less than 5%	10.7%
5-10%	35.7%
11-20%	10.7%
21-30%	14.3%
31-50%	14.3%
More than 50%	0%

If Sales Decreased 1990-1991, How Large Was Decrease?	
Less than 5%	6.3%
5-10%	43.8%
11-15%	12.5%
16-20%	25.0%
No Answer	12.5%

Perception Index



Comments by Printers

- Business is growing for the ones left.
- In the last 1½ years, business has stopped growing.
- We are doing more desktop publishing than ever before and plan to expand in that area.
- I hope things get better.
- The area's slow. Only businesses with established good customers will survive.
- Business should stabilize by third quarter 1992.
- We've been hit hard by the recession.
- 1991 was a challenging year. We expect growth in 1992.
- We plan to expand in the area of desktop publishing.

Educational Institutions at a Glance

In terms of employment, education is considerably smaller than some of the industries we have looked at (retail, for example, employs nearly 13 million). However, it is still sizeable, employing about twice as many people as the printing industry. Of these 1.6 million employees, 63% are employed by colleges and universities, where the ratio of students to staff is much lower than in elementary and secondary schools. Like the insurance industry, education meets many of its printing needs with in-plant shops.

Total Establishments: 33,225
Employees: 1,630,888
Total Annual Payroll: $25,019,000,000

Source: U.S. Department of Commerce, County Business Patterns

Statistical Outlook for Education

As noted on the cover page, education is not exactly an industry, with projectable sales figures. Its prospects depend on a host of entangled social, political, and economic issues, many of them unpredictable. It also depends on demographics; the portion of the population in the five- to 17-year-old bracket has declined more than 10% over the past decade, and the college-age population (18 to 24) has fallen almost 20%.

Projected Enrollment Increase, 1988-1991
3.0%

Increase, High-School Graduates, 1980-1992
18.9%

Source: U.S. Department of Education, National Center for Education Statistics

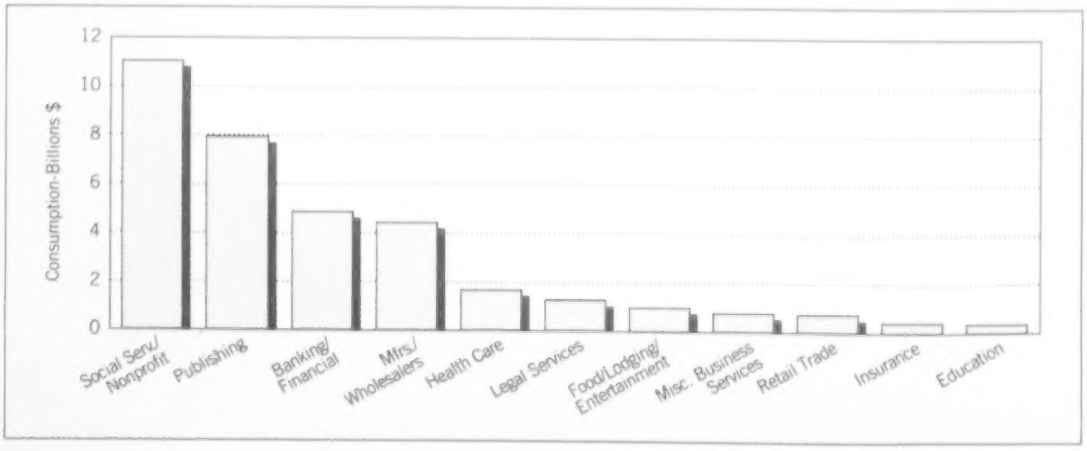
	1987	1986	1985	1980
College Enrollment (millions)	N/A	12.4	12.5	11.4
High school graduates 25 yrs. old and over (percentage)	75.6%	74.7%	73.9%	68.6%
College graduates 25 yrs. old and over (percentage)	19.9%	19.4%	19.4%	17.0%

Source: USA Statistics in Brief: 1990 (A Statistical Abstract Supplement)

Charts and graphs by Annabelle Carter

Ranking of the Print Target Markets

Industries to be covered in the Print Target Markets series in 1992 were selected from a DRI/McGraw-Hill listing of the largest purchasers of goods and services from commercial printers. This list was further refined by the editors, primarily by the elimination of industries that are not logical targets for small- to medium-size commercial printers. The resulting list represents more than a third of all business-to-business printing sales.

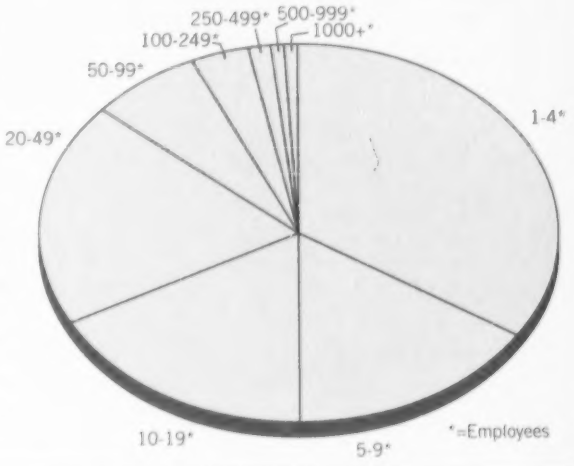


Educational Establishments by Employee Size

Measured this way, establishments of every kind tend to follow the same general curve: mostly small, tapering off gradually to somewhere between 50 and 100 employees, after which the dropoff is precipitous. Schools differ from the businesses we have studied so far in being clumped more in the middle; the 20-49 employees percentage is comparatively quite high.

1-4 Employees	11,437	34.4%
5-9 Employees	5,248	15.8%
10-19 Employees	5,678	17.1%
20-49 Employees	6,388	19.2%
50-99 Employees	2,304	6.9%
100-249 Employees	1,252	3.8%
250-499 Employees	436	1.3%
500-999 Employees	287	0.9%
1000+ Employees	197	0.6%

Source: U.S. Department of Commerce, County Business Patterns



Educational System Structure

Education, like health care (see GAM, January 1992) is not, strictly speaking, an industry. However, the structure of the educational system in this country (as in any other) is very like that of an industry in which raw materials—students—are processed for various lengths of time to produce various end products. The single largest category is elementary schools, from which a majority of children, though by no means all, progress to secondary education, or high school (often known in the private-school sector as preparatory schools, academies, etc.). A smaller percentage goes on to further study, either in college or vocational school, and a still smaller group eventually finds its way into degree-granting graduate schools of some sort. These institutions produce the nation's crop of professionals, that is, people who must hold an academic credential to be licensed to work: doctors, lawyers, architects, registered engineers, and college profesors, to name the most common. They have the lowest student-to- teacher ratio, and are far and away the most expensive part of the educational structure.

Category	Establishments	Employees	Total enrollment
Elementary andSecondary Schools	14,539	433,584	40,024,299
Colleges and Universities	3,018	1,012,868	12,400,000
Libraries	1,655	16,954	N/A
Vocational Schools	4,420	85,981	N/A
Other	8,695	79,151	N/A

Sources: Department of Commerce (County Business Patterns, Statistical Abstracts), Department of Education

Regional Profile–Education

Region	Public School Enrollment	Enrollment Increase 1988-1991	1980-1992 Increase, High School Graduates
New England	1,880,718	3.3%	-30.9%
Mid Atlantic	5,345,367	1.1%	-32.9%
E. North Central	6,979,338	0.3%	-25.7%
W. North Central	2,898,995	1.7%	-26.5%
S. Atlantic	6,565,786	4.1%	-30.3%
E. South Central	2,738,906	-0.8%	-13.6%
W. South Central	5,028,534	1.5%	-6.9%
Mountain	2,276,197	5.8%	-5.9%
Pacific	5,667,295	7.9%	-5.7%

Sources: Dept. of Commerce, Dept. of Education

Key to Regions

The nine geographic regions, as referred to throughout this survey:

New England (NE): Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. **Mid-Atlantic (MA):** New Jersey, New York, Pennsylvania. **South Atlantic (SA):** Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington, D.C., West Virginia. **East South Central (ESC):** Alabama, Mississippi, Kentucky, Tennessee. **East North Central (ENC):** Illinois, Indiana, Michigan, Ohio, Wisconsin. **West North Central (WNC):** Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. **West South Central (WSC):** Arkansas, Louisiana, Oklahoma, Texas. **Mountain (M):** Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. **Pacific (P):** Alaska, California, Hawaii, Oregon, Washington.

A Primer For the Future

A thorough company evaluation will set the printer on a positive course toward 2001.

Worried about the future? There's ample evidence you should be, according to participants in the recent "Printing Firm of the Future" conference, sponsored by the Printing Industries of America (PIA) and held in Alexandria, Va. But steadfast vigilance (as in keeping abreast of technical advances, marketing ploys, economic factors, your customer base, employee management, and profitability, among other things) coupled with your own reserve of industry knowledge might enable you to keep your company's head above water.

Sinking will be all too easy, however. As moderator R. Judson Fisher, president of Manhardt-Alexander, Inc., noted, "All of us are experiencing radical changes. It's more important than ever before to be aware of future trends." (For the purposes of this article, "future" will be defined as the next 10-20 years.) Those trends are divided into two groups, Ronnie Davis, PIA chief economist added: "External factors (the economy, print markets and customers) which are outside your control, and internal factors (management, investment, marketing and profitability) which you can control."

The questions you need to ask yourself (and have a ready answer) include:

What products/services will you offer?

What customers/buyers will you seek?

What technology and processes do you need?

How will you deal with the competition?

How will you react to external forces you can't change?

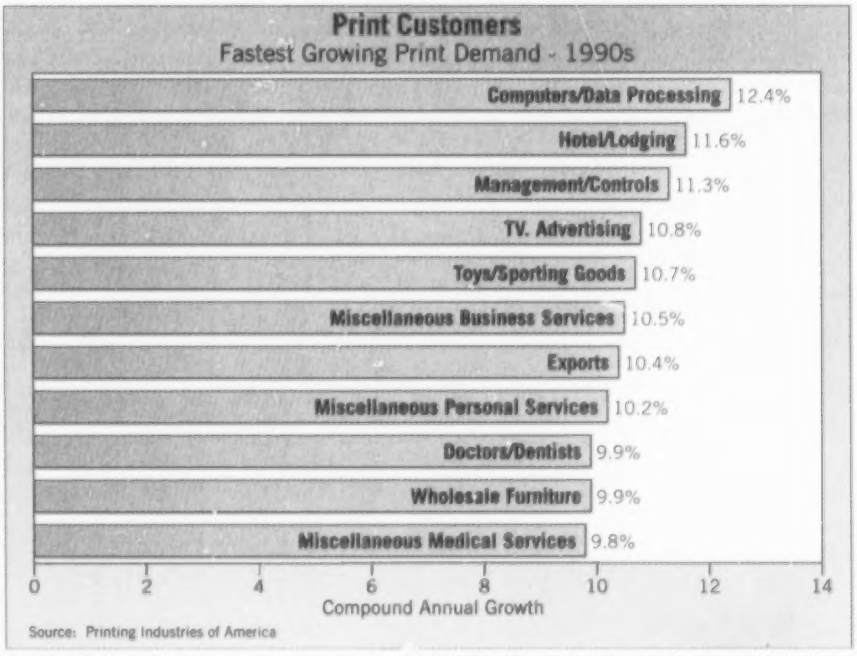
Other points to keep in mind when thinking about the future of your business:

—Work force needs. Regardless of the skills on hand, and how proficient your technicians are, their skills will be obsolete by the year 2000.

—Customer base. In the past, said speaker Wallace Stettinius, chairman and CEO of Cadmus Communications, Richmond, Va., customers have typically been "found" by salespeople. Now, and in the future, you must research to figure out who your customers are (or who you want them to be), and send the salespeople out to them.

—Waterless printing. Stettinius predicts the "waterless plate will redefine the market, wreak havoc. The larger sheetfed press

By Michael Karol
Managing Editor



The above chart puts a fix on the fastest-growing potential print customers for the '90s.

will be squeezed by webs on one side and smaller, efficient machines on the other."

—New business habits. The "old ways" create walls between suppliers and customers. Soon, if not already, you'll be competing on the basis of time, not price. The concept of "inventories" will become obsolete.

—Work force environment. Currently, about 80% of the print work force is tied up in routing things, from prepress to the bindery. That will change as processes are roboticized and plants streamlined. Processes and machinery will not need to be attended to, but watched.

—Technological obsolescence. Conventional photography, stripping, and other prepress and pressroom jobs will be obsolete or entirely changed, thanks to new technology. "The greatest impact on printing will come from changes in how information is created," said PIA's Davis.

—Vertical markets. These markets, such as healthcare and software, which cross a broad spectrum of industries, are the ones to target for future business, according to consultant David Raphael, president of the Marcar Management Institute in San Mateo, Calif. Chart these markets' growth to discover those companies in your community with the most pressing need for printed product [see also the Print Target Market series, running year-long in GRAPHIC ARTS MONTHLY, p. 59].

—Electronic pressroom. Keep in mind that most of the information that will come to you in the next decade will be electronic. Are you capable of receiving it and distributing it properly, so you can work with it?

At least an electronic pressroom will facilitate the printer's handling of a fragmented society, which is what statisticians say is happening to America. Davis added that with the fragmentation comes consumer markets that are more segmented. The implication is new, extremely targeted marketing programs for printers.

> "THROW YOURSELF INTO THE FRYING PAN. SEE HOW IT FEELS. IT'S A GOOD WAY TO GET YOUR JUICES FLOWING."

The real key to success, said Stettinius, will come in how *different* a printer can be. "Customers generally decide on price. You must impress them with your competitive advantage." And finding your advantage starts with redefining your purpose, Stettinius suggests: "We define ourselves by our processes (web offset, sheetfed, etc.). That's the wrong mindset. You have to think in terms of products and the lifecycles of those products. Once you've established what your products are, examine why your customers buy from you. Then you can begin working on a better mousetrap, to better satisfy customer needs."

The best way to do this is to "know thyself". David Hart, president of Hart Graphics, noted, with tongue in cheek, "The trouble with our times is the future is not what it used to be." Hart's point is well taken; since ideas, and realities, about the future have changed, the best way to meet this new world head on is by knowing as much as possible about your company. "Look at your people, technology, equipment utilization and capacity, systems, and financial capability," Hart said. "Study the markets you want to be in, or are in. Consider the barriers to entry: technology, capital, market knowledge, and distribution channels. Look for industry consolidation and latent competitors; look at suppliers, and examine forward and backward distribution."

Basically, Hart advocated, employ the concept of benchmarking, taking an objective, third-party view of your business. Benchmarking is a continuous process of determining success factors; comparing yourself to your toughest competitor or "best-in-class" performer; and using information to develop strategies and functional plans. The goal is to make your company the best in the market.

"Overcome the 'frog-in-the-frying-pan scenario'," said Stettinius, "where, if you put a frog in a frying pan and turn the heat up very slowly, he won't move, and eventually, he'll fry. But if you turn the heat up suddenly, the frog will jump, and survive. Throw yourself into the frying pan. See how it feels. It's a good way to get your juices flowing."

Raphael stressed that while the threat of electronic publishing has been held over the print industry's collective head for years (as an eventual substitute for its product), in fact consumer spending for the printed word has risen on an absolute level every year since 1970. Four times more is spent on print than on electronic product.

Printed materials will be around through the next century and beyond. The ultimate question printers need to answer is, "Will my company still be there, producing them?"

New Recycled Definitions Stir the Market

Setting the standards and definitions of paper grades that content recycled papers has been a challenge for industry, government, and consumers. When the issues were first raised in the mid-1980s, spurred on by landfill closures and floating garbage heaps, the industry sought easy identification of recycled paper. Any paper that was recovered after "virgin fiber" processing could be categorized as recycled. Under these standards, nearly all mills could claim a secondary fiber content, simply by reprocessing "broke", which is production of off-spec paper or paper formed after a machine "break". Broke could be directed to a "broke pit", which is a tank below the machine that can repulp fibers and return them to processing. Soon after this loophole was challenged, "preconsumer" and "postconsumer" categories were born.

> *"The new definition would allow over-issue magazines, printer clippings, and other similar wastes to be part of postconsumer waste."*

The issue became a product labeling question, usually the domain of the Federal Trade Commission (FTC). But the Environmental Protection Agency (EPA), which had established a dialogue with the industry concerning dioxin (see last month's column), took up the issue and led the first foray into proper labeling. The result was rather primitive definitions of preconsumer and postconsumer paper waste, and mills began to turn out a variety of grades to suit the definitions. The so-called "50/10" grades, which contain 50% preconsumer and 10% postconsumer waste fibers, are still a market force, but some mills are already moving aggressively toward higher waste fiber contents to meet the next generation of standards and definitions put forth by a blue chip committee in February.

The overall concern was, "Who is the consumer?" and "By what definition is paper consumed?" The Recycling Advisory Council's (RAC) Special Task Force on Standards and Definitions and Recycled Paper was formed by the National Recycling Coalition (NRC) to answer those questions, and enlisted consultants to forecast the compatibility between the new classifications and the amount of recovered paper and its processing capacity. At the same time, not-for-profit organizations and for-profit businesses are attempting their own labeling scenarios.

RAC's new code is a proposed recycled paper standard, that has two criteria which must be met: "total recycled fiber" and "postconsumer or comparable fiber". Total recycled fiber is defined as "fibers derived from recovered paper excluding any paper generated at the paper mill prior to completion of the paper manufacturing process." Postconsumer or comparable fiber is defined as "fibers derived from postconsumer materials as defined by the Resource Recovery Act (RCRA) Sec. 6002 and including fiber derived from recovered paper which has been printed and/or contains inks or colored dyes."

The main conflict surrounds the "postconsumer or comparable" fiber criteria. By including "comparable", the new definition would allow over-issue magazines, printer clippings and other similar wastes to be part of postconsumer waste. Critics charge that waste from offices, small businesses and homes will be driven back into landfills. Further, technologies to deink waste, particularly those from offices (like laser prints and photocopying), will develop slower.

The result could be disastrous. With no outlet for office waste other than expensive landfills, businesses might be forced into the "paperless office" concept. The Paper Definitions Working Group, a private body serving as a watchdog and advocator of recycling initiatives, is pressing for categorical differences between "real" postconsumer material and preconsumer waste which it considers industrial (printers, converts, etc.).

NRC's board votes on the procurement recommendations and the RAC standards and definitions this month. If accepted, EPA could have the language for a revamped RCRA and the FTC could have its new labeling criteria (see Table 1.).

(Continued on p. 130)

Table 1. Government procurement criteria for paper products

Product	*Total Recycled Fiber*	*Post-Consumer or comparable fiber*
Newsprint	40%	40%
Uncoated printing and writing	50%	15%
Coated printing and Writing	40%	10%

Source: Recycling Advisory Council, Special Task Force on Standards and Definitions and Recycled Paper

Table 2. U.S. production and fiber composition of printing and writing paper
1990 v. 1995 (millions of tons)

	1990	*1995*
Production	21.8	26.8
Woodpulp requirement	16.3	18.7-19.9
Recycled fiber requirement	1.2	1.4-2.7
Recycled fiber content	6.8%	6.8%-12.9%

Source: Andover International Associates

Nevertheless, some 400 printing and writing grades in today's market boast of recovered paper content, but their production has had very little impact on solid waste reduction. Total content of recovered fiber in printing and writing production could increase from 6.8% to 12% by 1995 (Table 2, pg. 128). The 40% recovery rate goal (or 35 million tons) may be achieved, but the growth of paper production will out-pace recovery and disposal in landfills will increase. An increase in tipping fees, assisted by a nationwide contraction of landfill capacity, will drive consumers of paper away from their copy machines and computer printers unless measures of recovered paper "closure" are instituted.

Newsprint, tissue, and containerboard producers have registered some success, both economically and logistically. There are several examples of closing the wastepaper cycle. McDonald's recycles its containerboard by collecting it and paper waste at eateries, then returns it to mills that process the material to make recycled paper bags and recycled paperboard products. Stone Container and Waste Management have a joint venture called Paper Recycling International, which uses and trades waste collected through Waste Management's programs at Stone's paper mills.

So far, the economic incentive has eluded printing and writing producers. Cross Pointe Paper, a division of Pentair, collects paper from large corporations like Dow Chemical and others that have office recycling programs. They make several book and converting grades containing up to 25% "real" postconsumer paper. Very few printing and writing producers have closed-end collection and production loops, and their content of "real" postconsumer is somewhat mythical.

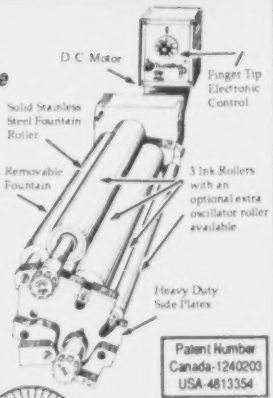
Consumer group labeling offers private initiatives attempting to solve the recycling language in marketing and labeling products. "Green Seal" is a not-for-profit organization, funded by foundations and individuals, that is setting standards and definitions for consumer products on a case-by-case basis. The company looks at environmental impact and opportunities at reducing it via consumer awareness and action. Tissue producers have already accepted the Green Seal standard and printing and writing producers are in the final stages of acceptance.

The certification process for printing and writing producers is focused on four distinctions: paper fiber sources, use of deinking solvents, bleaching and performance and packaging. Paper fiber sources impact recycled paper content. Certified printing and writing grades must be produced from 60% recovered paper and 15% postconsumer. Recovered paper is defined as paper recovered from industrial plants like printing and converting operations, but it would not include paper mill broke. Postconsumer paper is defined as paper waste generated by a business or consumed for its intended use. Green Seal is currently reviewing comments and inquiries, and a decision will come later this spring.

THISTLE BOYD
U S A
Small Press-Alcohol Free
Dampening System
with the one year factory warranty

Sell more color work
Print better solids
Control ink & water balance

- *Highest quality unit on the market*
- *Designed to pay for itself in less than a year*
- *Finger tip electronic control*
- *Uses standard Syntac rollers*
- *No plastic seals or springs*
- *No cloth covers*
- *Easy to operate*
- *Easy to install*
- *Alcohol free system*


D.C. Motor
Finger Tip Electronic Control
Solid Stainless Steel Fountain Roller
Removable Fountain
3 Ink Rollers with an optional extra oscillator roller available
Heavy Duty Side Plates

Patent Number
Canada-1240203
USA-4813354

THISTLE BOYD
U S A
Simply the best dampening system designed for the small offset press
P.O. Box 581117 • Tulsa, Oklahoma 74158
918-835-6510 • 800-537-2514 • Fax 918-836-4016
For literature, price and the name of your closest dealer
CALL 1-800-537-2514

Circle No. 128 on Reader Service Card

SUN TECHTRONICS

INTRODUCES OUR NEW **Litho-Master**

ADVANCED APPLICATION DAMPENING SYSTEMS

These high quality systems are now available in specific configurations to fit many popular sheet-fed and web offset presses. Notable features include microprocesser controlled electronics for virtual automatic ink-water balance without the use of alcohol, "on demand" hickey-picking, as well as selective modes for operating as either an inker-integrated or plate-feed type dampener. Refrigerated circulation systems are standard on all models.

Suntechtronics offers a full, no-risk money back guarantee that your company will experience higher productivity, higher quality and higher profits with the **AAD System** over the dampener you are currently operating.

Call our toll-free number

1-800-786-8325

for a quote on your particular application

Sun Graphic Technologies, Inc.
14801 Trinity Blvd. Ft. Worth, TX 76155

Circle No. 191 on Reader Service Card